Raising an outbound fault with Magrathea

If you have found a fault on calls being placed outbound over the Magrathea network, there are certain things we will need to enable us to investigate and, if necessary, raise the fault with our interconnect partners.

A description of the issue

An accurate description of the issue you would like to report is essential. This is especially the case with audio faults, where we need to know which direction is affected and, in the case of noise or interference faults, what is heard and by whom. It's also useful to know when the problem started.

Can the issue be replicated?

If you are experiencing an issue dialling a number:

- Can it be successfully dialled from a different CLI?
- If so, is it possible that the called party has blocked the original CLI for some reason? CLIs can also be blocked at a networks level.
- For calls to an overseas number, is your CLI a local/national number for the country you are dialling? Many countries will not allow internationally originated calls to present a CLI that appears to be local/national.
- Ensure that international CLI is presented in the correct format, please see our LI Agreement for details.

If you are experiencing an audio issue:

- Is the issue present on all calls, or is intermittent?
- Do you have examples where the audio issue is not present? This is useful for comparison purposes.
- Is the issue present if the number is called from a different CLI or from a mobile?

For audio issues, we will need a full SIP trace with RTP media for analysis.

Call examples

Call examples are very important for a variety of reasons – they help us identify any common denominators or patterns in call routing and/or carrier, any errors in CLI or number format and gives us information on where and why a call may have failed.

Our standard requirement is at least three examples from the last 24hrs, which is also a requirement of our interconnect partners, and a fault may not be accepted if the call examples are older. If you can provide more than three examples, they would be very welcome!
We may need to do some testing ourselves, we will ask for permission to do this. If we are unable to duplicate the issue you have reported, we may ask for more information on the numbers being dialled or the nature of the calls being placed.

Raising the fault with our interconnect partners

Once the fault has been proved and we have all the information we need, we will raise the fault with the relevant interconnect partner. They in turn will open a ticket and investigate.

Sometimes, if the fault is not specifically with their network, they may have to raise a fault with an up-stream provider. This may mean that we will need to wait for responses, which can cause delays. We may also be asked for more call examples and/or traces.

We will do everything we can to get a timely resolution and keep you updated during the investigation process.

Faults – frequently asked questions

For any questions or queries regarding any of these scenarios, please call 0345 004 0040 or e-mail support@magrathea-telecom.co.uk

Outbound – faults with placing calls outbound

Problem – you are unable to place any calls outbound via your account

Solution – there are a number of reasons why you may be unable to place outbound calls, some of the most common are listed below:

Are there funds on your account? – you will not be able to place any calls if your account does not have available funds. You can check your balance via our Client Portal and also transfer funds between accounts if required (the funds transfer facility is available via the RESTAPI or Client Portal only).

Are you unable to Register? – if your system requires registration, you can register to <username>@sipgw.magrathea.net prior to making calls. However, we do not require registration before call attempts are made, provided that the username and password are presented in the INVITE. If you are using the correct user name and

password and sending calls to the correct destination, please send a trace of a failed call including the responses from our network to Support for analysis.

Is your account authorised by IP? – for an account set up to validate by IP address, we will only accept calls from the IP addresses you have provided. You will need to check if the IP address of the failing call is on your authorised list. If not, please contact Support and we will add it to our network. Remember that you must send calls to sipipgw.magrathea.net.

Are you using IAX? – you will need to send traffic to iaxgw.magrathea.net. If your call fails, please send sample details to Support and we will investigate.

Problem – you are unable to place specific calls outbound via your account

Solution – there are a number of reasons why you are unable to place a specific outbound call, the most common are listed here:

Is the number you are dialling invalid? – check that the number you are dialling is a valid number, by dialling from another provider.

Is number you are dialling blocked? – Magrathea works very closely with our carriers to detect and prevent fraud. It is possible that the number you are trying to dial has been blocked due to fraudulent activity. We can review this situation with our carrier, but we will need any information you can provide on the number you are trying to dial, for example who it should connect to and whether it's a business or personal number. Please send this to Support and we will liaise with our carriers.

Is your account on a limited tariff? – Magrathea offers two limited tariffs to assist you in preventing fraud. Each allows calls up to and including a specific value based on our current rate sheet, so if the destination you are trying to dial is over this amount, the call will fail. Please note that our limited tariffs only allow you to dial basic UK destinations. If you would like the limited tariff removed from your account, please e-mail Support, or you can make this change via the Client Portal.

There is a carrier fault – if you believe that the number you are trying to dial is valid and your account is not on a limited tariff, it may be that the carrier we are using to route your call is failing. Please raise this to Support and we will investigate and raise a fault with the carrier if necessary. We will require at least three call examples as most of our carriers require this. If possible, we will change the routing to the destination to ensure that your calls complete.

Is the CLI causing the call to fail? – sometimes the called party or the called network can block the CLI for various reasons, including for nuisance calls.   In addition, some countries do not allow a local or national CLI to be presented on an internationally originated call. The best way to check these scenarios is to try dialling the same number with a different CLI.

New CLI regulations mean that calls to UK and Irish numbers that present a local CLI but originate from a non-local account will be blocked on all accounts. If you are a UK customer trying to place calls to Ireland or an overseas customer trying to place calls to the UK, we will need a legitimate use case, please contact Support with this information.

Is the call subject to an origin based surcharge? – a number of UK networks are now adding a surcharge to calls originating from certain countries. These calls are identified by Network CLI. As standard, all accounts will reject any call where the surcharge is higher than 5ppm. We provide full details of all surcharging on our monthly rate file. It's important to note that there is also a surcharge for calls with missing, invalid or incorrectly formatted CLI.

Full details can be found here:

https://www.magrathea-telecom.co.uk/wp-content/uploads/Guidance-for-UK-and-Ireland-Surcharging-September-22-1.pdf

Problem – the CLI you are passing is not being received by the called party correctly

Solution – you need to ensure that you are passing UK CLI correctly, please refer to our Line Identity Agreement for supported forms.

You need to send non-UK caller ID as 00 <country code> <number> or + <country code> <number>. This needs to be placed in the correct portion of the PAID or RPID header, or the From field if PAID/RPID is not supplied.

If you are confident that the CLI you are passing is correct, it may be that our onward carrier is not handling the CLI correctly. Please note that due to the range of quality carriers we use, we do not guarantee international CLI. However, we are always willing to raise the issue with our carrier for investigation, so please send details of the call, along with the CLI that is being sent and received to Support.

Please see our guidance on passing CLI:

https://www.magrathea-telecom.co.uk/wp-content/uploads/Guidance-on-Network-and-Presentation-numbers-3.pdf

Problem – you are unable to dial 999 over your Magrathea account

Solution – you will only be permitted to dial the emergency services if you have returned signed contacts (Schedule and Annex 5, these can be found on our Client Information download site) and completed the testing process with a member of our support team. If you would like to enquire about the facility to dial the Emergency Services, please contact Support and we will send you details.

Problem – you are unable to dial short codes through your Magrathea account

Solution – we allow specific short codes to be dialled via our network, eg 101 and 111, details of these can be found in our current rate file. It is important to note that these codes must be presented to us with a proceeding 44* or the calls will fail. If you believe you are presenting these calls correctly but they are failing, please send a SIP trace to Support for analysis.

Problem – your call has connected but there are audio issues

Solution – Audio issues can vary greatly as can their causes, for example one way audio, no audio or voice distortion, but there are things you can check that may resolve the problem:

Do you have our up to date firewall information? – this will ensure that you are not blocking calls and/or RTP media.

Have there been any change or updates on your network recently? – any change on your network may affect aspects of call routing.

Are you or your client experiencing issues with their ISP? – this could result in packet loss which can cause poor audio.

Please contact Support if you have identified an audio issue, it would be useful to know if the issue is present on all calls, and if the issue is present when the number is dialled from a different CLI or a mobile. We may also need a full SIP trace with RTP media for analysis.

Problem – your call has DTMF issues

Solution – DTMF, Dual Tone Multiple Frequency, works by producing tones, which can be used to tell which number has been pressed. Previously, we have always recommended that a-law used with inband was sent to and from our network, because the vast majority of calls were converted to TDM and passed to a TDM network which would only be using inband. Following the switch to IP, we now recommend that RFC2833 is the primary means of DTMF transmission.

Please see our guide to interoperability, which contains a lot of information regarding the move from the legacy TDM infrastructure:

https://www.magrathea-telecom.co.uk/wp-content/uploads/Interoperability-FAQ-and-best-practice-1.pdf

Inbound – faults with Magrathea or ported numbers

Magrathea offers a numbering API or the MAGIC portal to meet your numbering requirements.

Problem – you cannot STAT or SET/VIEW a number that you believe should be assigned to your account.

Solution – the number may have ported away, expired or been de-activated. If you are sure that the number should still be live and assigned to your account, please email Support and we will check its status for you.

Problem – you cannot assign an 0800, 0871/2/3 or 09 number via the API or the MAGIC portal

Solution – 0800/0808 numbers are not available to assign in the API because they have to be linked to an account for payment purposes, as there is a charge to you to receive calls on freephone numbers. If you would like a 0800/0808 assigned to your account, please contact Support and we will assign one for you. It would be useful if you could give us a target at the same time, so we can SET this as well.

0871/2/3 and 09 numbers are not available in the API by default, as they are regulated by the Phone-paid Services Authority. Please contact Support if you require these types of numbers, as there is additional paperwork we will require and Due Diligence we need to complete before we can assign any numbers.

Problem – you are not receiving calls to a number that is assigned to your account

Solution – there are a number of reasons that you are not receiving calls, the most common are listed below:

Is the number assigned to your account and active ? - you can check this using the STAT command in the numbering API or the SET/VIEW command in the MAGIC portal, which will give you the current status, expiry date and target. If the number is not assigned to your account and you believe that it should be, contact Support and we will check for you.

Is the target in the correct format? - SIP targets are usually S:<number>@<ip or URL>, IAX are usually I:<username>:<password>@<IP or URL>.

If your target is a PSTN or mobile, you will need to set it in international format, eg 443450040040. A fax-to-email target must be F:<email address>. We allow you to send calls to a SIP or IAX address or a fax-to-email free of charge, please note that you can only divert a number to a PSTN or mobile if you have a Chargeable NTS

account, as there will be a cost for a divert. If you do not have this type of account and you point your number to a chargeable destination, your calls will fail.

Is your server accepting the calls? – there are many reasons that calls we send you are not being accepted by your server, you or your technical team need to investigate on your side for the specific reason calls are being rejected. If you cannot resolve this, please contact Support as we can check a trace of a failed call and let you know the response we are receiving.

Do you have our up to date firewall information? – you need to ensure that you allow incoming traffic from us on all of our IP addresses, otherwise you may be blocking calls. For our up to date firewall information, please check the Client Handbook or contact Support.

Is the number ported? – there are a separate set of reasons why calls to a ported number may fail, please see our guide to porting in the UK and the common faults that can occur:

https://www.magrathea-telecom.co.uk/wp-content/uploads/Porting-in-the-UK_Common-Faults-3.pdf

Is the call reaching you but there is one way audio? – check our firewall information in the Client Handbook for full details, as if you firewall UDP traffic on your network, you must ensure this is current. For various reasons, we do not capture RTP media, so the quickest way we can assist you is if you send over a full SIP trace with RTP media.

The call is not reaching the Magrathea number – in the very unlikely event that a call does not reach a Magrathea number, it may be due to a data build error, where the originating network has not built our number range so cannot route the calls. If you believe this to be the case, please contact support@magrathea-telecom.co.uk